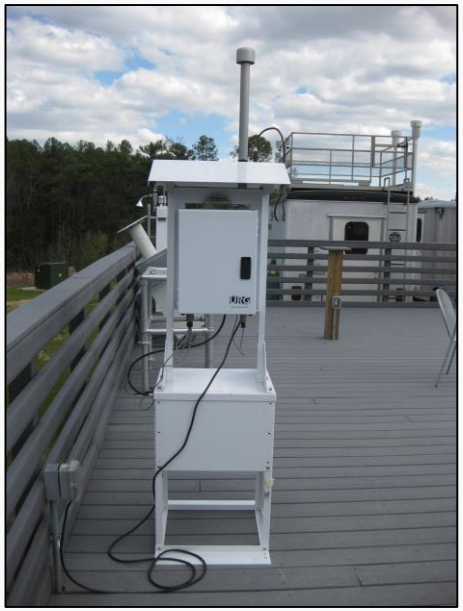
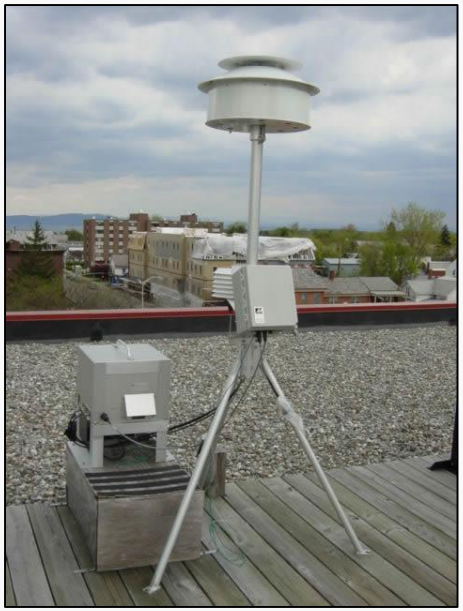


CSN Update

Beth Landis

8/13/14



Network Overview

- 1997 $PM_{2.5}$ NAAQS review led to the establishment of the Chemical Speciation Network (CSN)
- Initial monitoring began with 13 pilot sites in 2000
- Currently, the network consists of 189 sites:
  - 52 Speciation Trends Network (STN) sites
  - 137 supplemental sites
  - *174 sites utilize EPA's national contract and were considered in the network assessment*
- Sites collect aerosol samples of 24 hours on filters analyzed for:
  - $PM_{2.5}$ mass
  - Elements
  - Ions (sulfate, nitrate, sodium, potassium & ammonium)
  - Organic and elemental carbon (OC/EC)

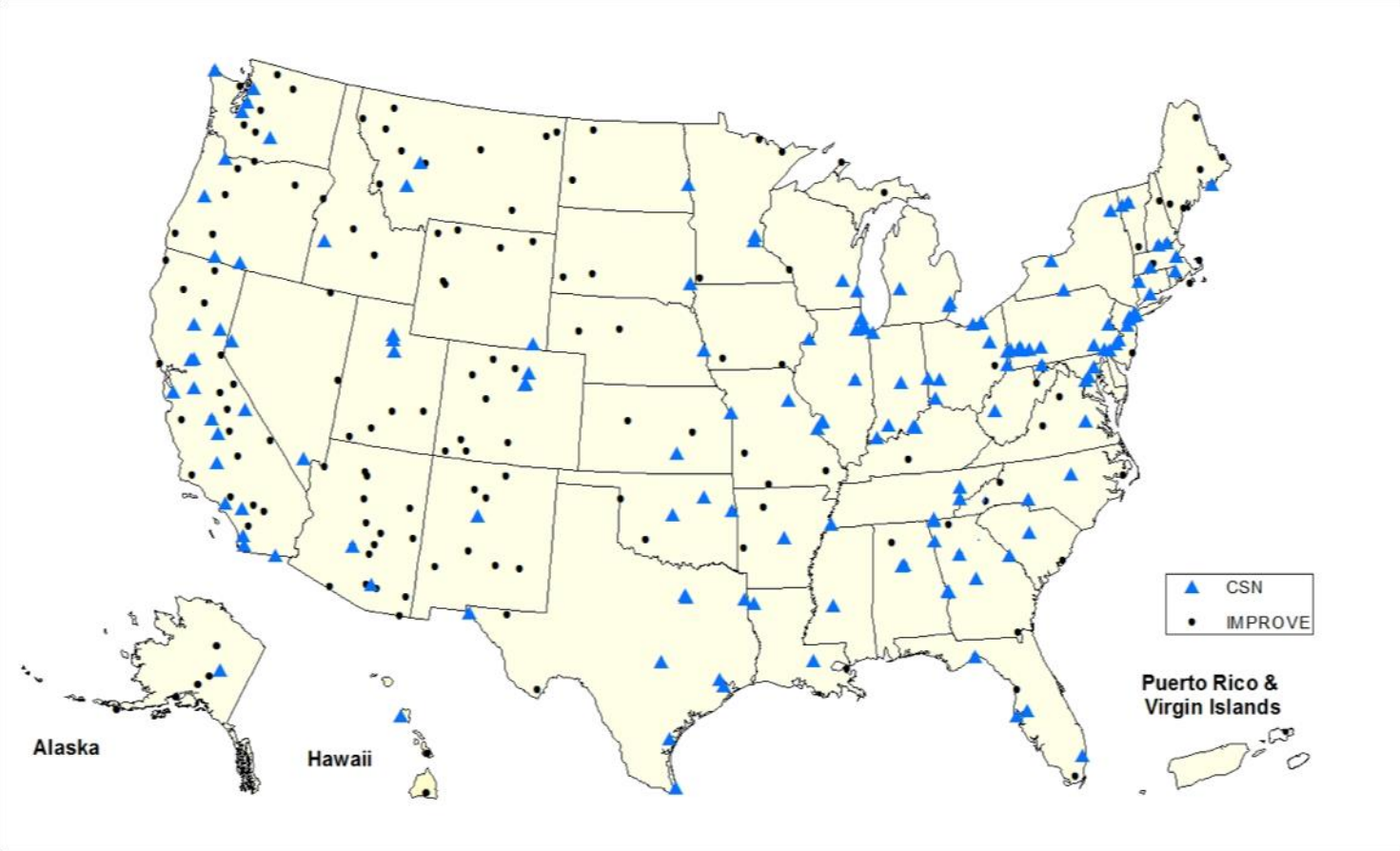
CSN Assessment Summary

- The following recommendations will become final in the next several weeks:
  - Defund* 44 sites (to be implemented Jan. 2015)
  - Eliminate CSN $PM_{2.5}$ mass measurement (to be implemented Oct. 2014)
  - Reduce sample frequency at 3 sites (to be implemented Jan. 2015)
  - Reduce carbon blank frequency (to be implemented Jan. 2015)
  - Reduce icepacks in shipment (to be implemented Jan. 2015)

- **THIS IS THE FINAL CALL FOR PROVIDING FEEDBACK**

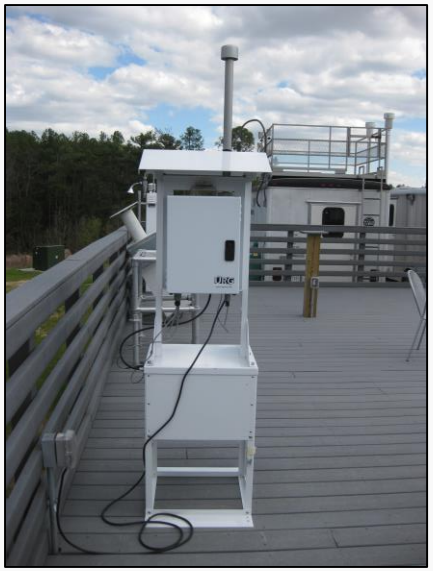
**Sites recommended for defunding will no longer receive laboratory analysis funding, however their speciation monitors may continue to operate if other funding sources are provided*

Map of Speciation Network After Assessment (Jan 2015)



URG3000N Software Revision

- URG3000N measures elemental & organic carbon (OC/EC) in the CSN
- Developed & deployed 2007-2009
- As operators gained experience, several programming issues became apparent
- The following software modifications have been made to address these concerns:
  - Sequential Schedule Option*
  - Flexible Schedule Option
  - Elapsed Time Modification
  - Filter Change Prompt



**While the URG3000N is now capable of sequential sampling, the MetOne SASS is not. Sites must also have a SuperSASS to utilize the sequential sampling schedule*

URG3000N Software Revision

- 174 sites utilizing the national contract lab (RTI) should have already received & installed the upgraded software
- To date, 30 CSN sites have switched to the sequential schedule (8 more sites will be switching in Aug/Sept)
- As part of the reinvestment funds from the CSN Assessment, we are considering upgrading 17 CSN sites that are currently on the alternate 1-in-3 schedule from a SASS to a SuperSASS

Please contact Beth Landis if you run a CSN site that does not utilize the national contract lab, or if you believe your site has not received the upgraded software

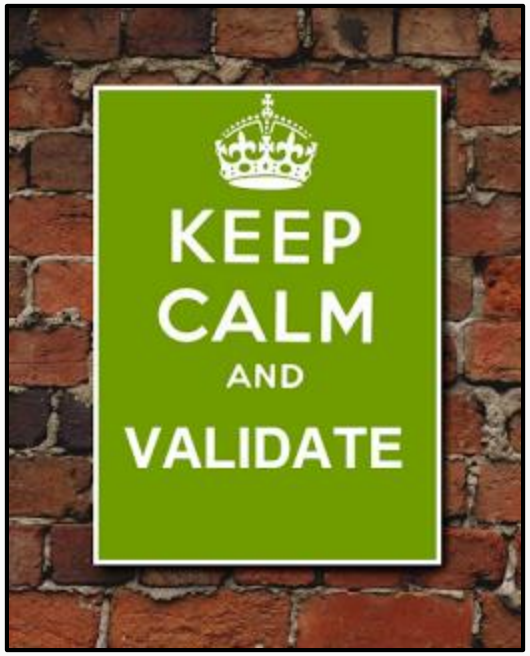
AQS Updates

- The system is ready to support the loading of CSN audit data directly

  - Dennis Crumpler has contacted several sites to test the process before rolling out to everyone in 2015
  - Data can now be loaded by sampler rather than by species

- PQAOs now have the ability to change raw CSN data in AQS

Data Validation Tools



- SDVAT has been available for state and local monitoring agencies to assist with data validation
- Currently working to create a data validation tool through AirNowTech that can validate data from several monitoring networks (e.g., CSN, PAMS, NATTS, etc.)
- Beta version of this tool was discussed during the Data Analysis Tools Training on Monday (information to be posted on AMTIC following the conference)

CSN QAPP/SOPs

- Several discrepancies have been identified between the various CSN guidance documents that we plan to address in 2015:
  - Action levels for instrument recalibration and data invalidation
  - Recovery time for samples
  - Frequency of cyclone/inlet cleaning

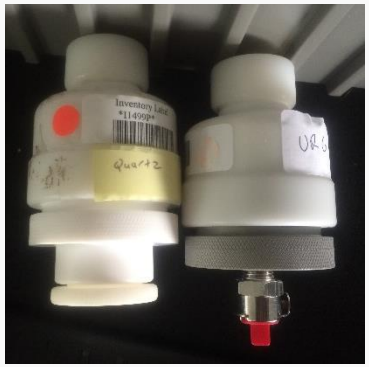
- Please contact Beth Landis or Dennis Crumpler if you are aware of other discrepancies that need to be addressed

Available Equipment

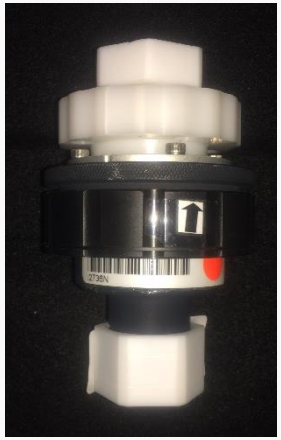
- The following equipment was used in a special study and is available to state and local monitoring agencies:
  - 40 (20 sets) of URG modules
  - 72 (24 sets) of R&P modules
  - 250 Andersen modules

- Please contact Beth Landis if you have a use for any of this equipment

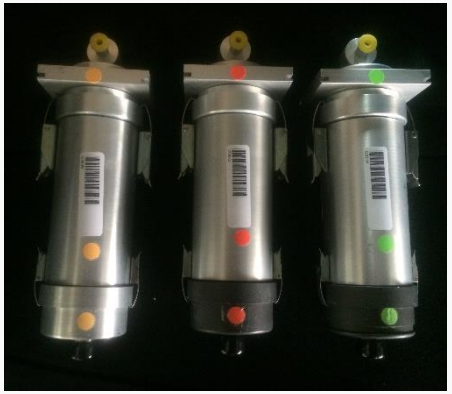
URG MASS



Andersen RASS



R&P3500



QUESTIONS?